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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,965	03/25/2004	Raghunath Vitthal Chaudhari	A36200-PCT-USA-A; 066123.	7075
21003	7590	10/26/2005	EXAMINER OH, TAYLOR V	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			ART UNIT 1625	PAPER NUMBER

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/808,965

Applicant(s)

CHAUDHARI ET AL.

Examiner

Taylor Victor Oh

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

***Final Rejection***

**The Status of Claims**

Claims 1-23 are pending.

Claims 1-23 have been rejected.

**Specification**

The objection of the disclosure has been withdrawn due to the modification made in the specification.

**Claim Objections**

The objection of Claims 1 and 23 has been withdrawn due to the modification of the claims made in the amendment.

**Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of Claims 2-3 ,5-6, 11-14, 19 and 22 under 35 U.S.C. 112, second paragraph, has been withdrawn due to the modification of the claims made in the amendment.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The rejection of Claims 1, 3, 5-10, 14-15, 17, 20, and 23 under 35 U.S.C. 102(b) as being anticipated clearly by Cesa et al (EP 0144118) has been withdrawn to the modification of the claims made in the amendment.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**The rejection of Claims 1-23 under 35 U.S.C. 103(a) as being unpatentable over Cesa et al (EP 0144118) in view of Nicholson et al (US 5,744,650) has been maintained.**

The rejection of Claims 1-23 under 35 U.S.C. 103(a) as being unpatentable over Cesa et al (EP 0144118) in view of Nicholson et al (US 5,744,650) has been maintained with the reasons of record on 2/10/05.

**Applicants' Argument**

Applicants argue the following issues:

- a. Nicholson relates to the production of aldehydes, and as such the reactants and products of the disclosed reactions are different from those addressed by the present invention, thereby providing no motivation for the skilled artisan in the art to combine the prior art due to the non-analogous pieces of art;
- b. The combination of Cesa and Nicholson would give no reason to expect the catalyst could be successfully separated and re-used since the Cesa process could effectively exhaust the catalyst present in the process.

Applicants' arguments have been noted, but the arguments are not persuasive.

First, regarding the first argument, the Examiner has noted applicant's argument. However, unlike applicants' argument, Nicholson expressly teaches that the most preferred processes using the metal-ligand complex catalyst are hydroformylation and carbonylation (see col. 46, lines 53-54); from this, there is a teaching of equivalence between hydroformylation and carbonylation. The carbonylation process is directly related to the claimed process as shown in step (a) in claim 1. Furthermore, Nicholson does recommend that one of the starting materials to be selected for the process is vinyl acetate (see col. 26, line 60), which is the same as the claimed enol ester. Moreover, the primary Cesa et al reference expressly discloses the preparation of 2-hydroxy carboxylic acid by the reaction of enol acylates

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with carbon monoxide and organic hydroxyl compounds to produce esters hydrolysable to hydroxy acids (see page 1 ,lines 1-9); similarly, Nicholson et al discloses the generic carbonylation process (see col. 46 ,lines 53-54) involved in using the metal –ligand complex catalyst which can be recycled back to the reactor (see col. 36, lines 33-35). Thus, there is a motivation to combine the prior art. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to incorporate the Nicholson's et al recycling step into the Cesa et al process in order to economize the overall process because the skilled artisan in the art would expect such a combination to be successful and economical as guidance(see col. 36, lines 33-35) shown in the Nicholson et al process. Therefore, applicant's argument is irrelevant to the issue of the invention.

Second, regarding the second argument, the Examiner has noted applicant's argument. However, unlike applicants' argument, there is no teaching of the exhausted catalytic activity found as a result of the process as seen in the primary Cesa prior art process which involved in the carbonylation and the hydrolysis. Furthermore, the secondary Nicholson prior art expressly teaches that the hydroformylation process involves the continuous liquid catalyst recycle process (see col. 36 , lines 25-26) ; in addition to the hydroformylation process, the secondary Nicholson prior art clearly recommends that the metal –ligand complex catalyzed process may useful in the other process, such as carbonylation(see col. 46, lines 53-54). From these teachings, it is quite possible to equally apply the recycling process of the palladium catalyst (see col. 7 ,line 31) used in the Nicholson process to the Cesa et al process since both processes are involved in

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the same carbonylation. Therefore, there is an expectation of success for its separation and re-use. Therefore, applicant's argument is irrelevant to the issue of the invention.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*John S. Oh*  
10/21/15

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